

What is claimed is:

1. A method of generating speech coding parameters of an erased frame in a bitstream-based front end of a speech recognition system, the method comprising the steps of:

detecting an erased frame;

computing the probability of a correct observation sequence from the group $\mathbf{O} = (\mathbf{O}^0, \mathbf{O}^m)$, where the probability is defined as:

$$P(\mathbf{O}^c | \lambda) = \sum_{q_1, \dots, q_N} \pi_{q_1} b_{q_1}(o_1) a_{q_1 q_2} b_{q_2}(o_2) \dots a_{q_{l-1} q_l} a_{q_l q_{l+1}} b_{q_{l+1}}(o_{l+1}) \dots a_{q_{N-1} q_N} b_{q_N}(o_N)$$

deleting the erased frame observation vector; and

decoding with a standard hidden Markov model process.

2. The method as defined in claim 1 wherein in performing the detection, the following steps are performed:

measuring the Euclidean distance between the line spectrum pairs (LSPs) of contiguous frames;

defining a steady-state threshold T ; and

deleting one frame of the contiguous frames when the Euclidean distance is less than the threshold.

3. The method as defined in claim 2 wherein the following relation is used to define the Euclidean distance:

$$\sum_{i=1}^p (\omega_{n,i} - \omega_{n-1,i})^2 = (1-c) \sum_{i=1}^p (\omega_{n-1,i} - \omega_{dc,i})^2$$

4. The method as defined in claim 1 wherein in detecting a frame erasure, an erasure is declared when the bits most sensitive to error within a frame are determined to be in error.

5. The method as defined in claim 4 wherein the bits most sensitive to error in a frame in a bitstream-based speech recognition system include the line spectrum pair information bits and the gain information bits.

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